

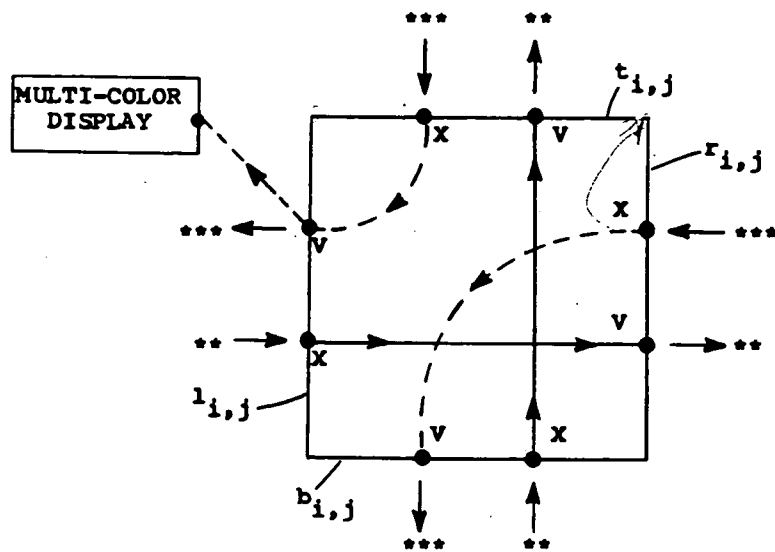
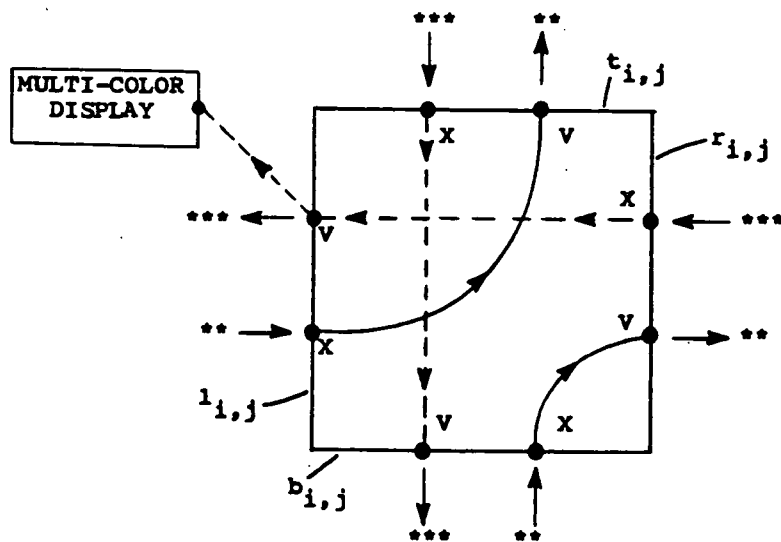
B: BOOLEAN FUNCTION

OBJECT								
OP-CODE	000	001	010	011	100	101	110	111

GEOMETRIC LAYOUT OF RAINBOWX FOR N = 4

FIG. 1

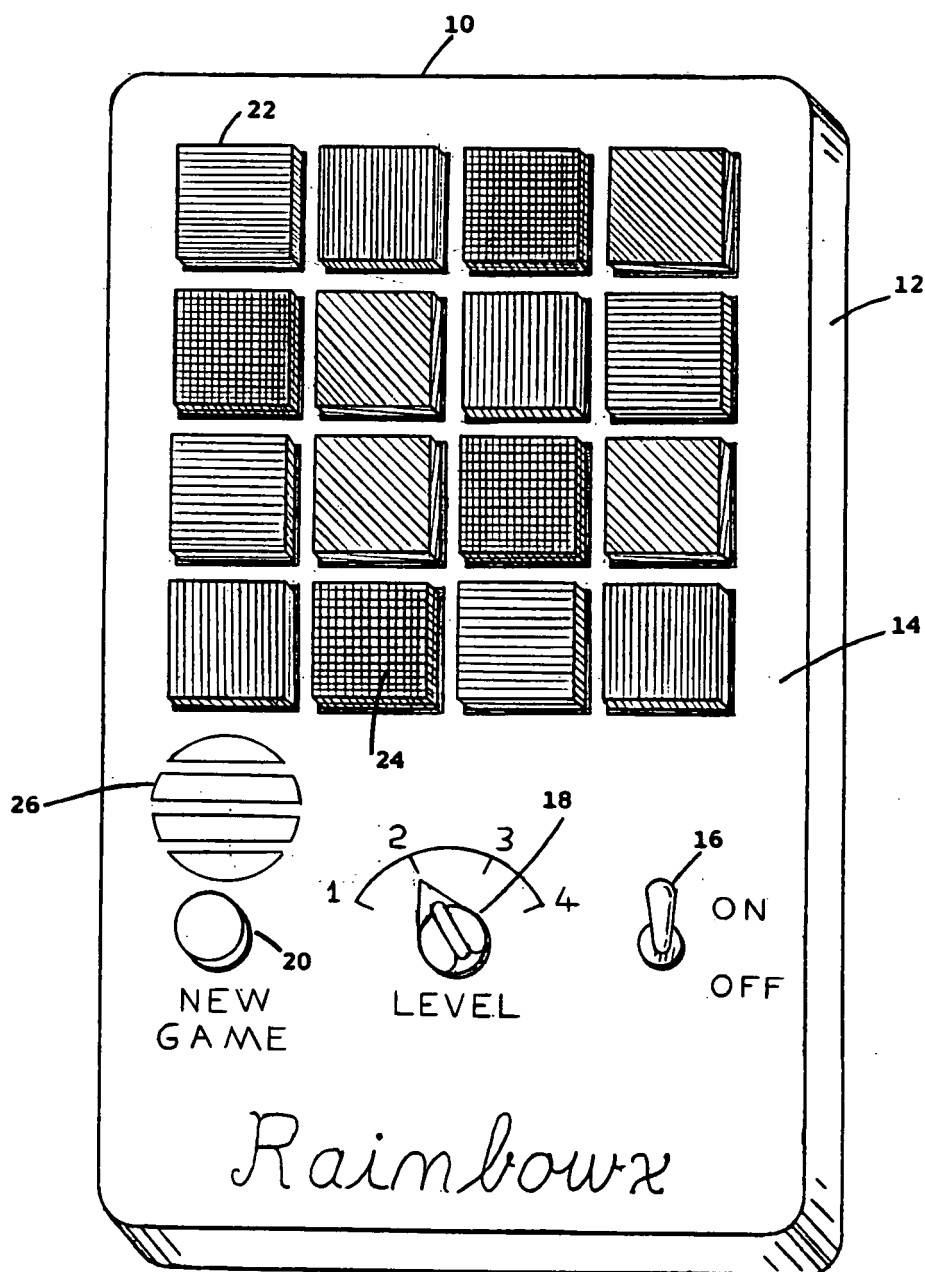
07/754465

SWITCH $w_{i,j}$ ON ("1")SWITCH $w_{i,j}$ OFF ("0")

LEGEND: ** OP-CODE
*** COLOR CODE

ROUTING SQUARE $S_{i,j}$

FIG. 2



RAINBOWX GAME DEVICE

FIG. 3

01/754465

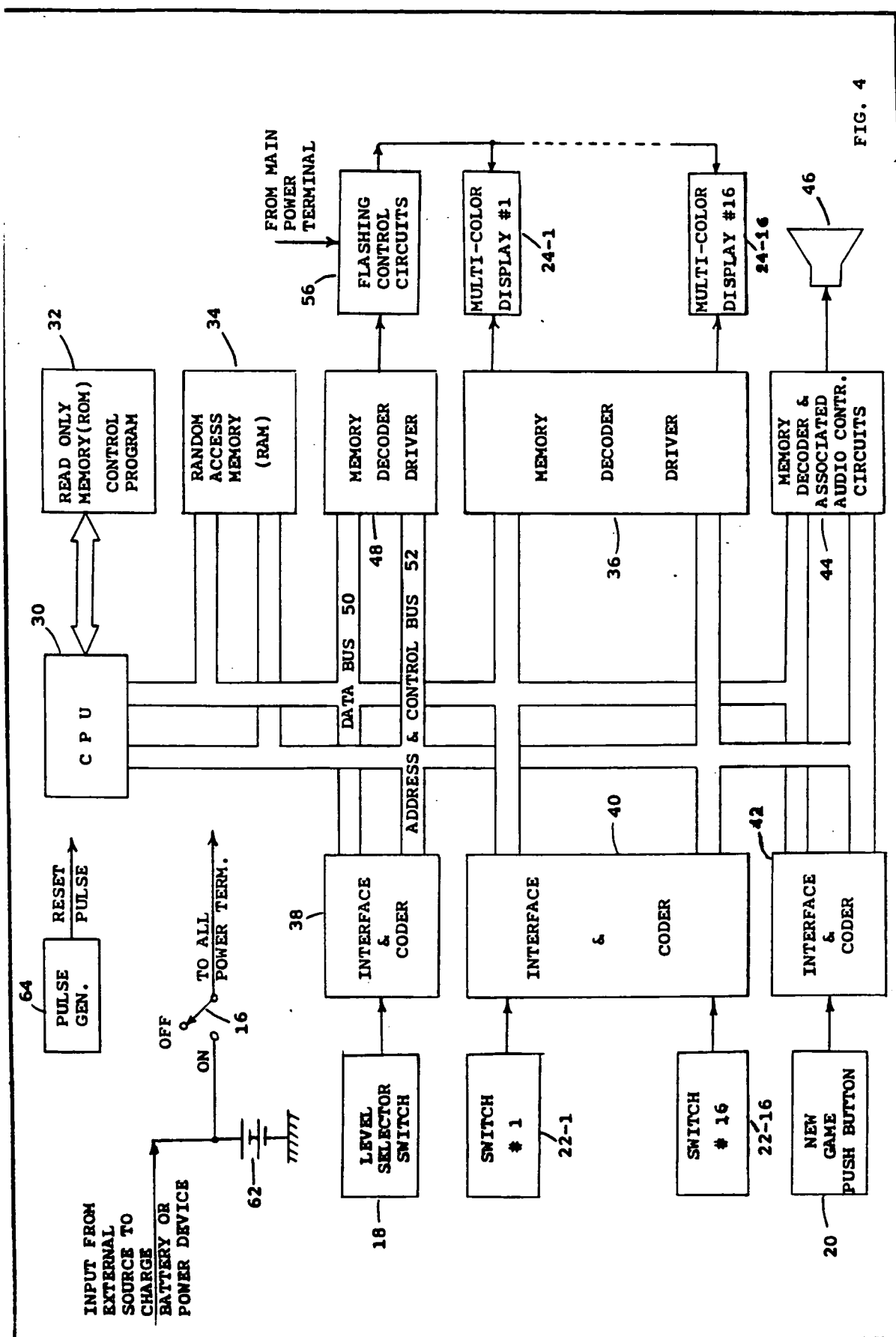


FIG. 4

07/754485

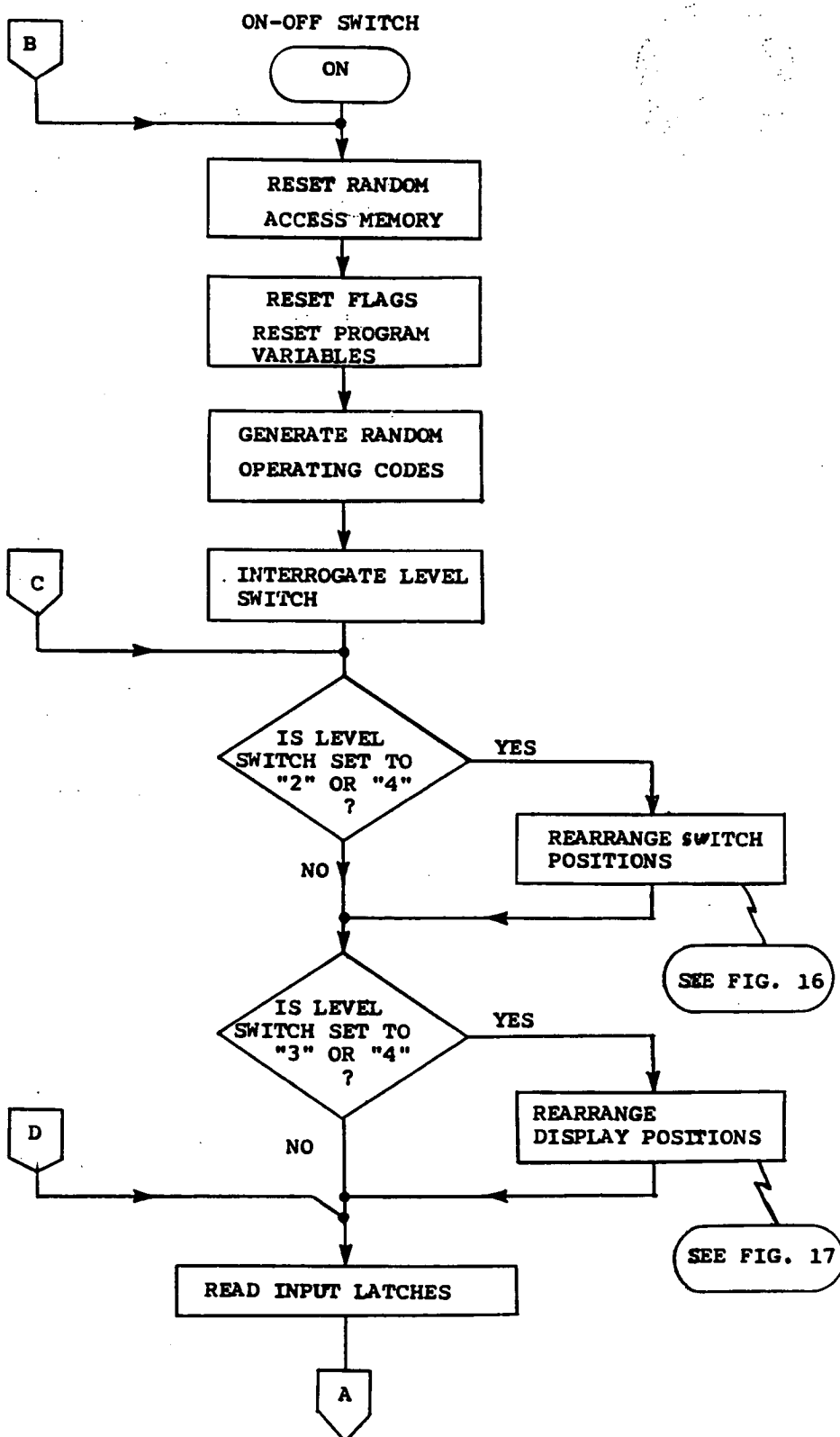


FIG. 5

01/754465

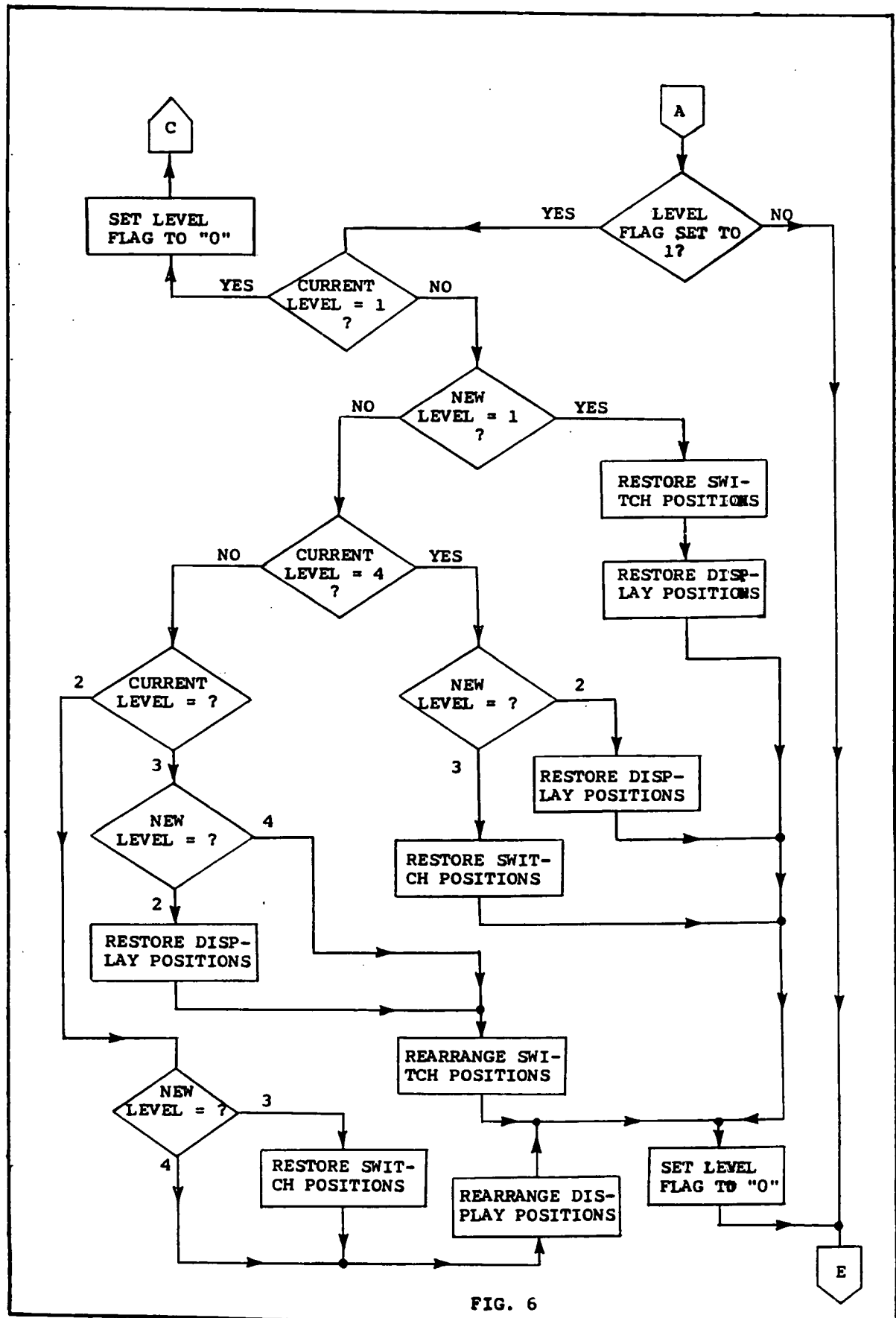


FIG. 6

07/754465

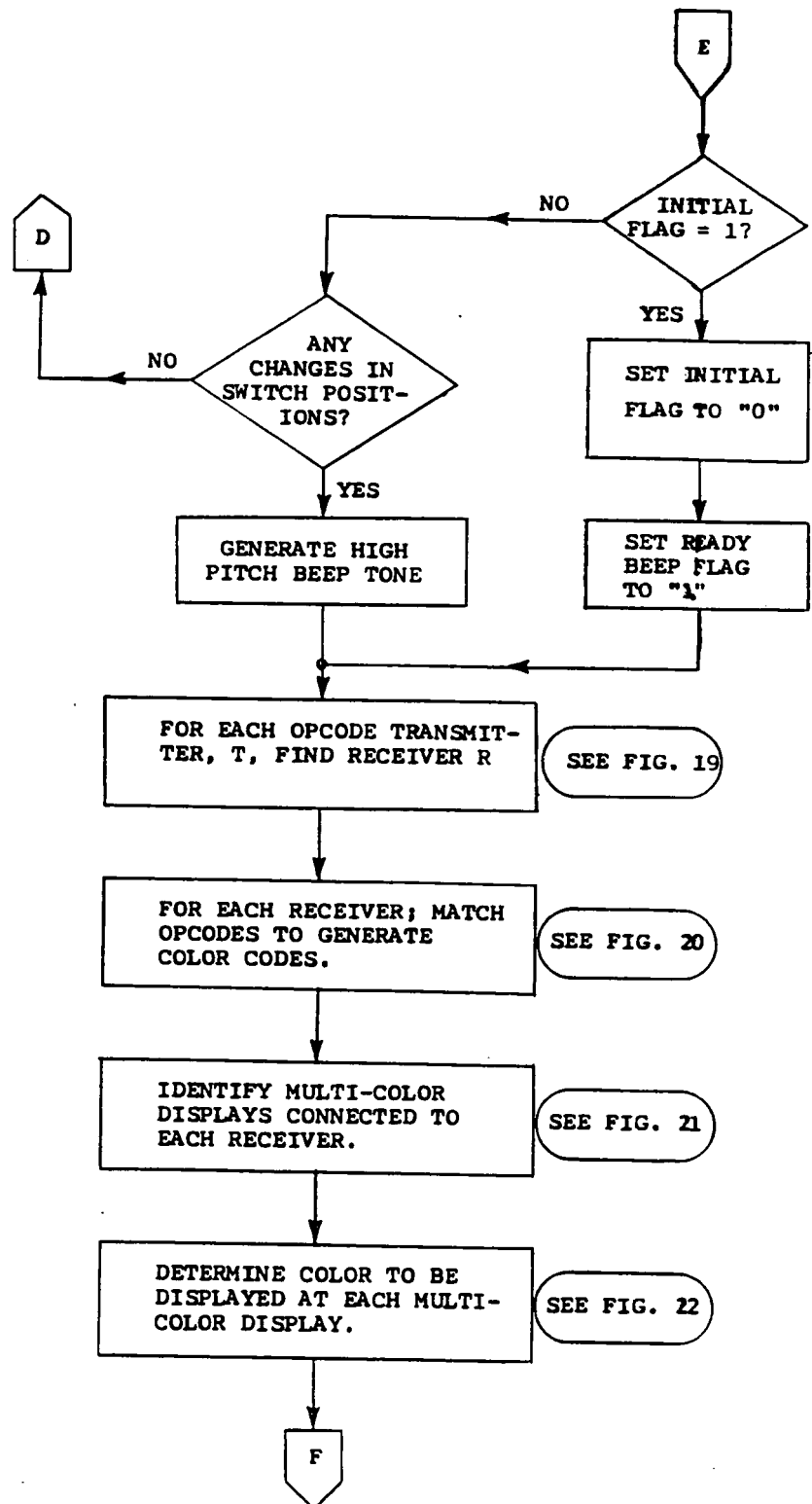


FIG. 7

07/754465

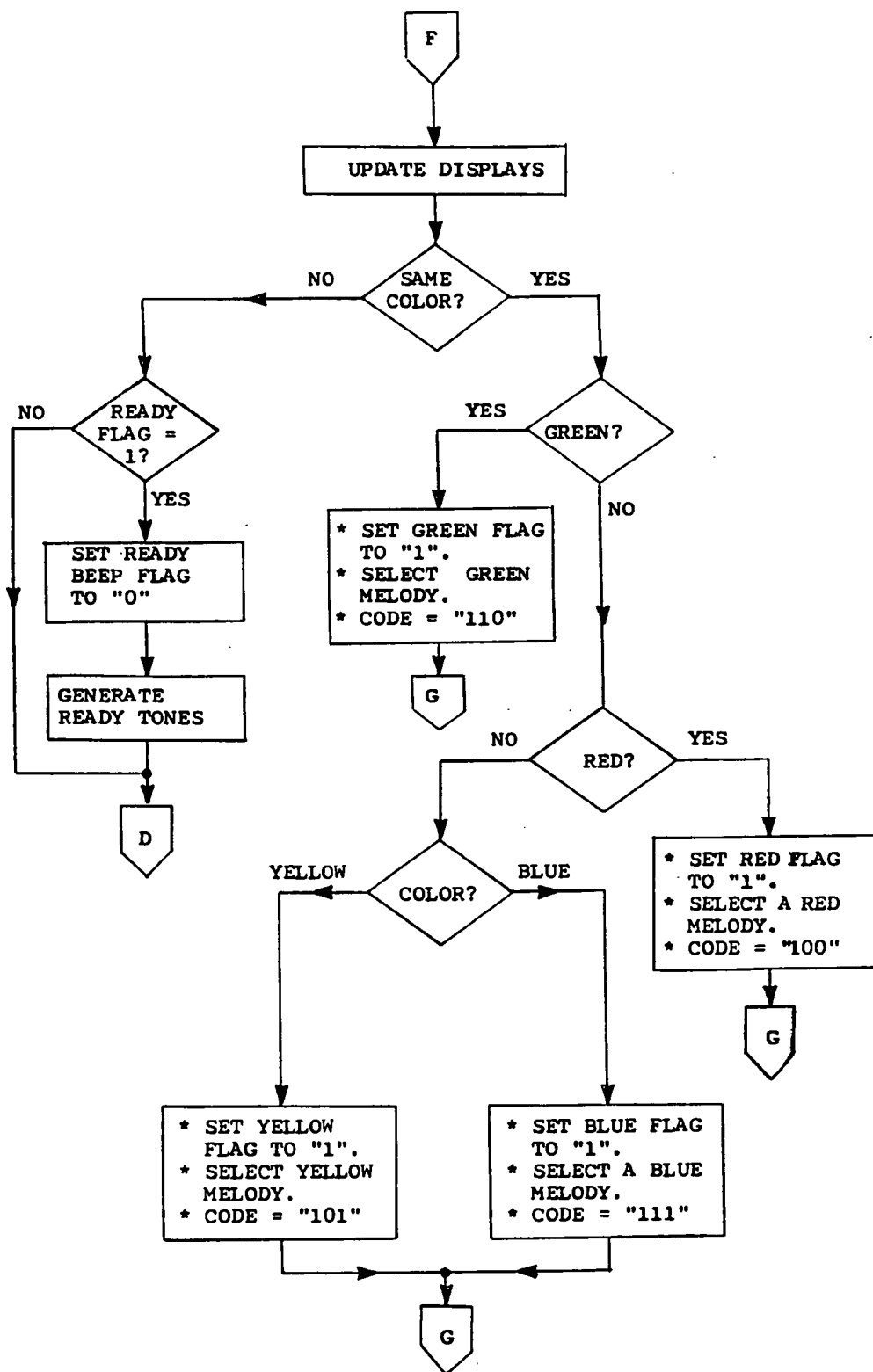


FIG. 8

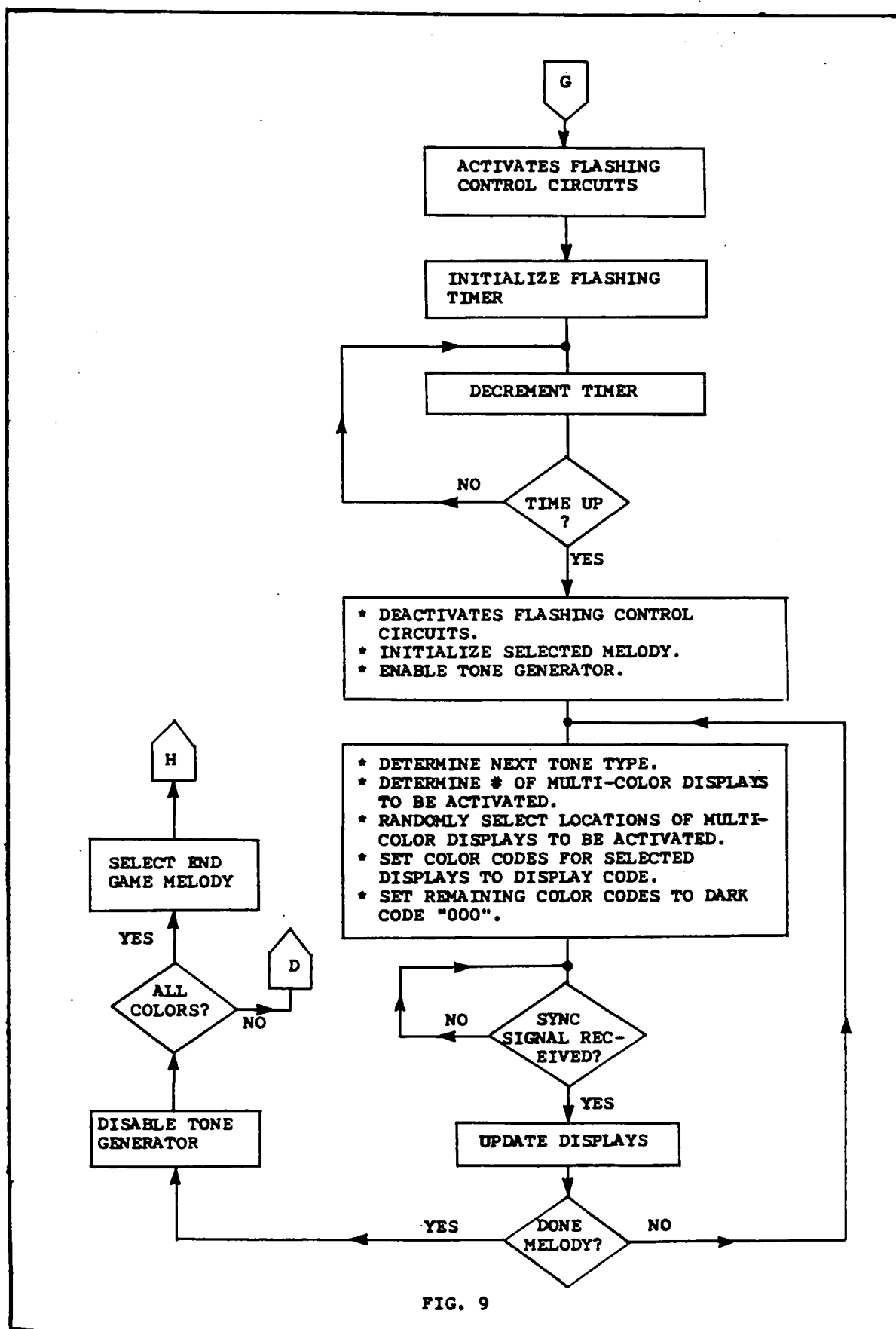


FIG. 9

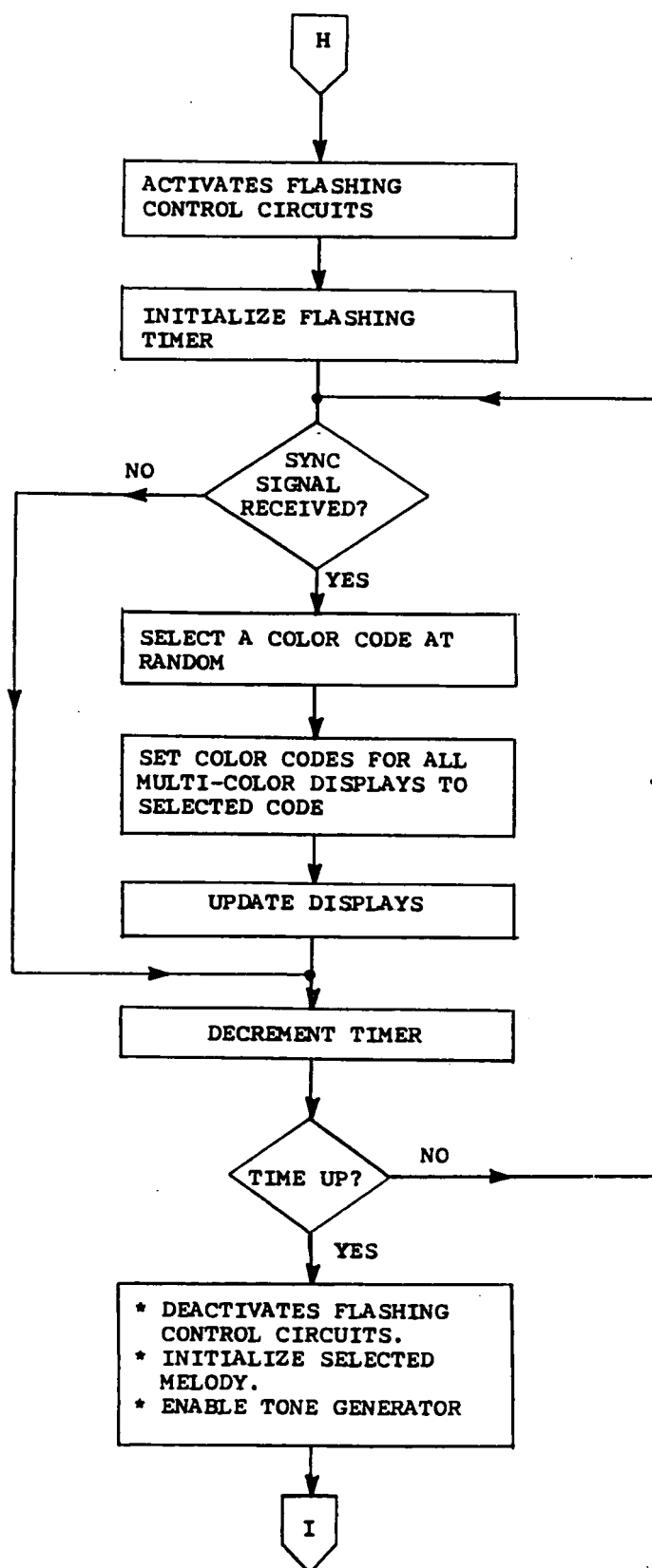


FIG. 10

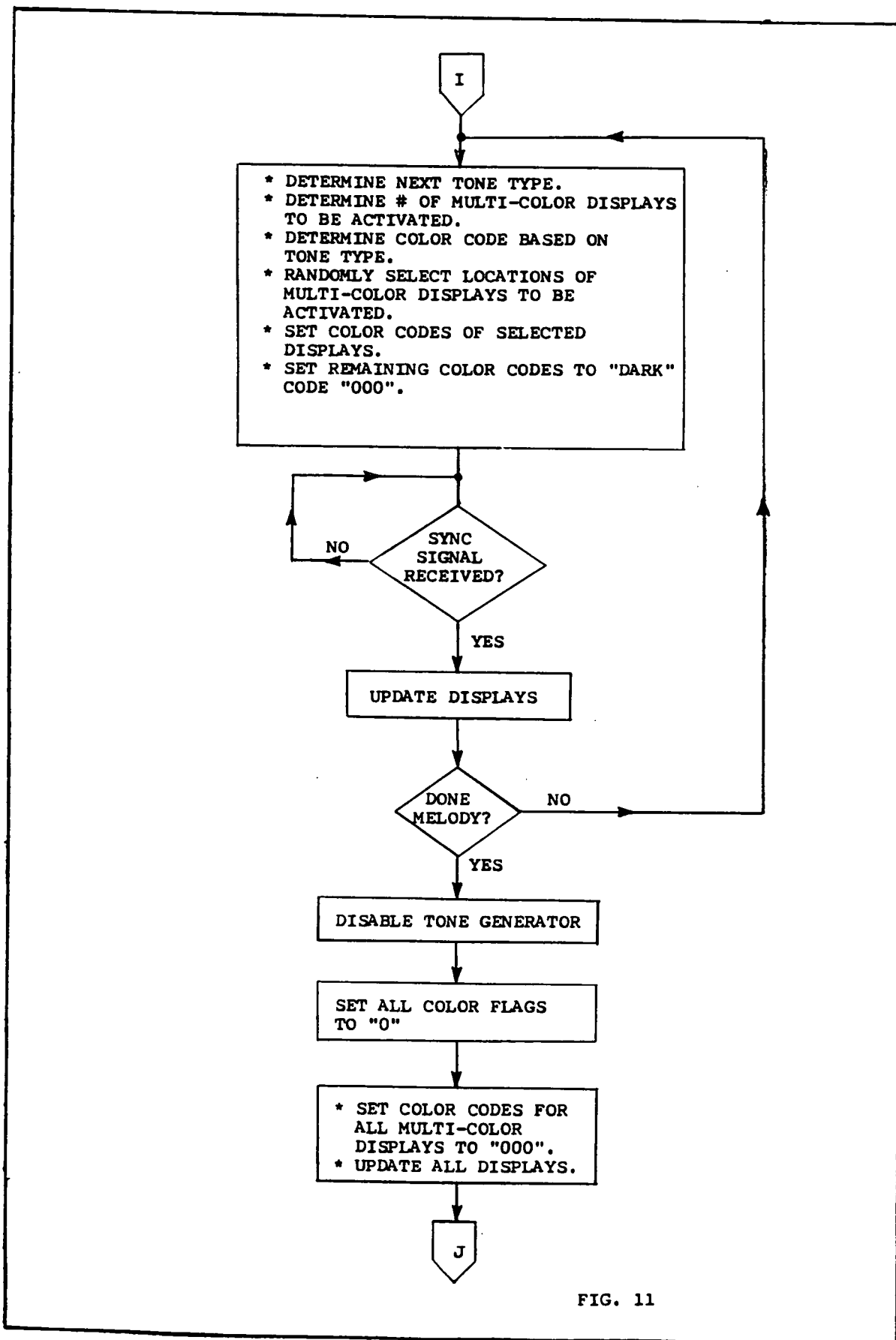


FIG. 11

07/754465

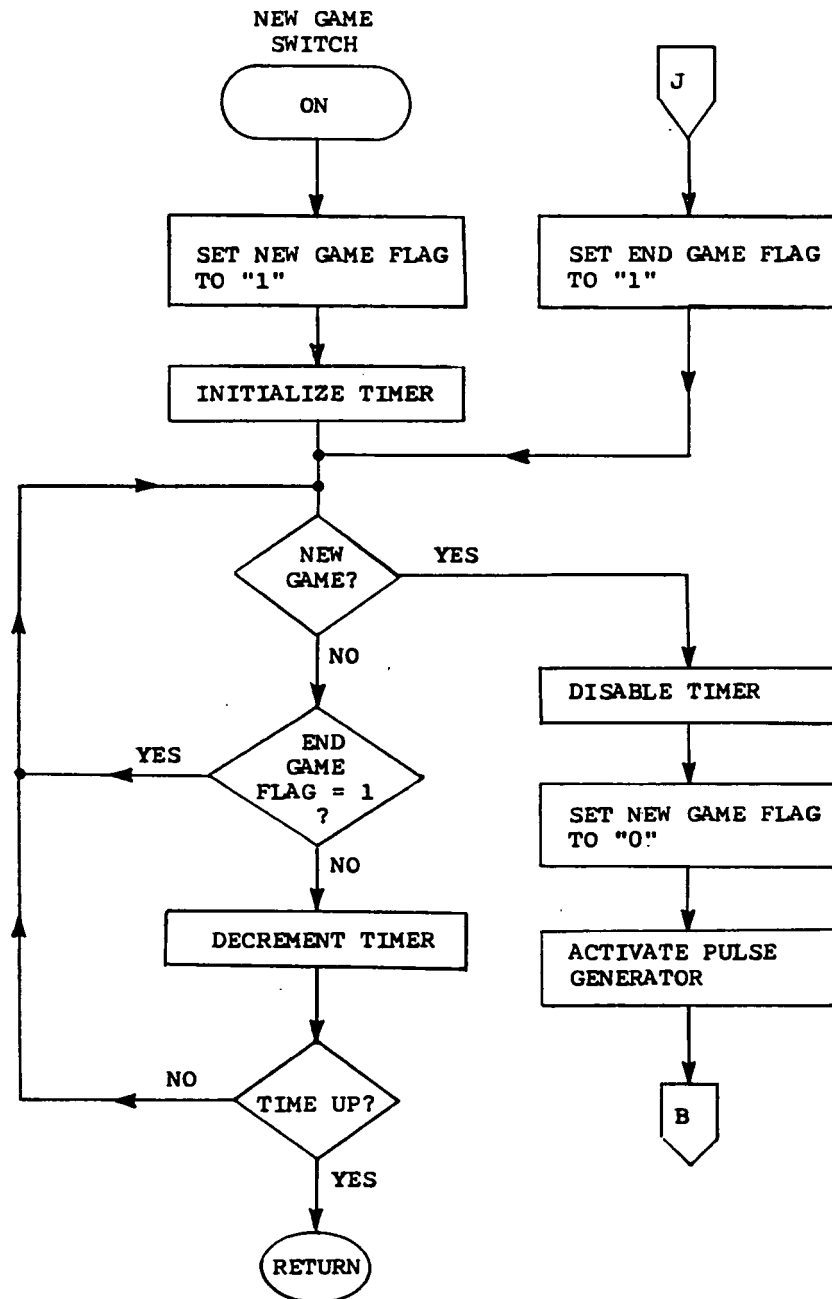


FIG. 12

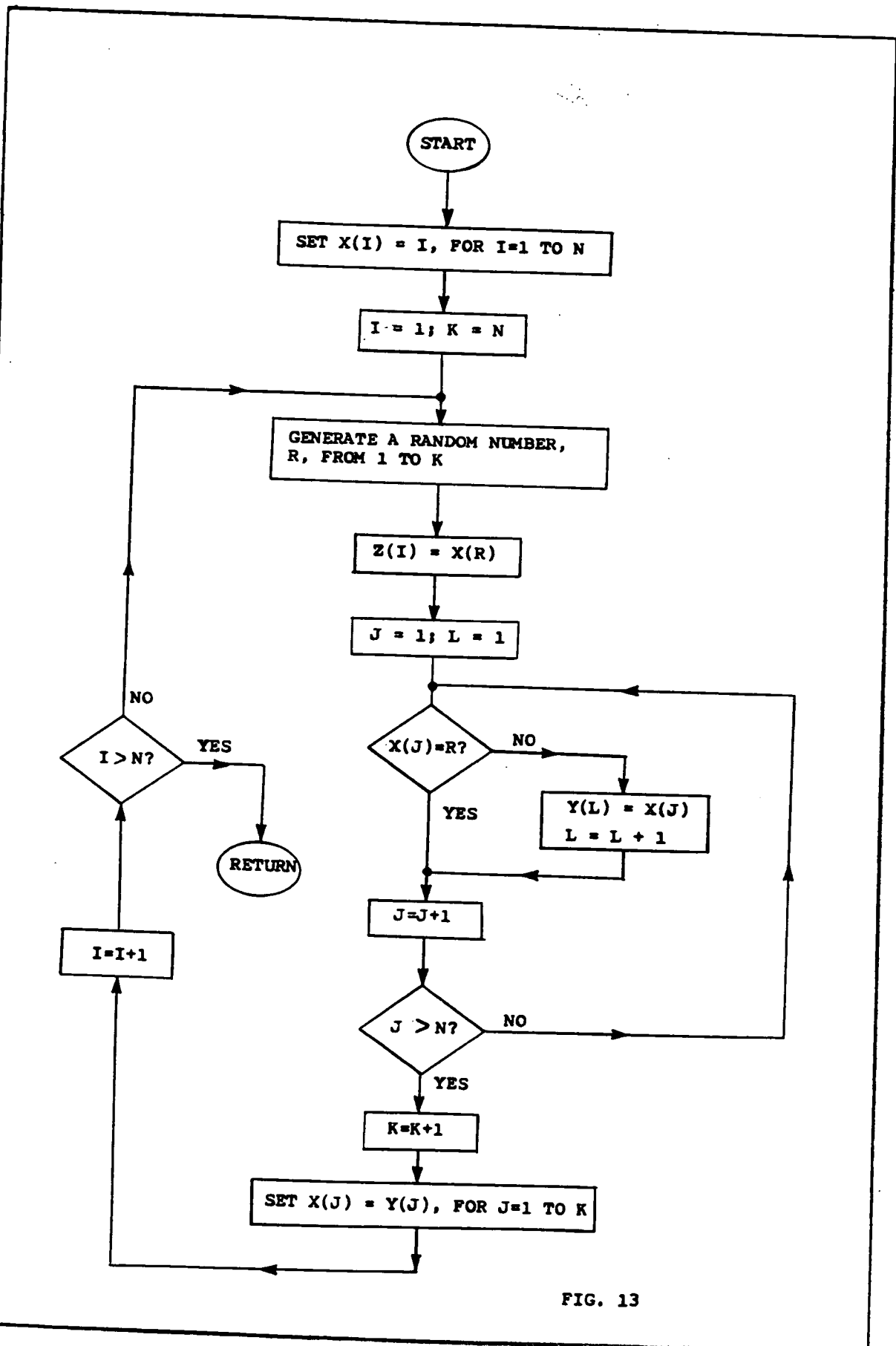


FIG. 13

07/754485

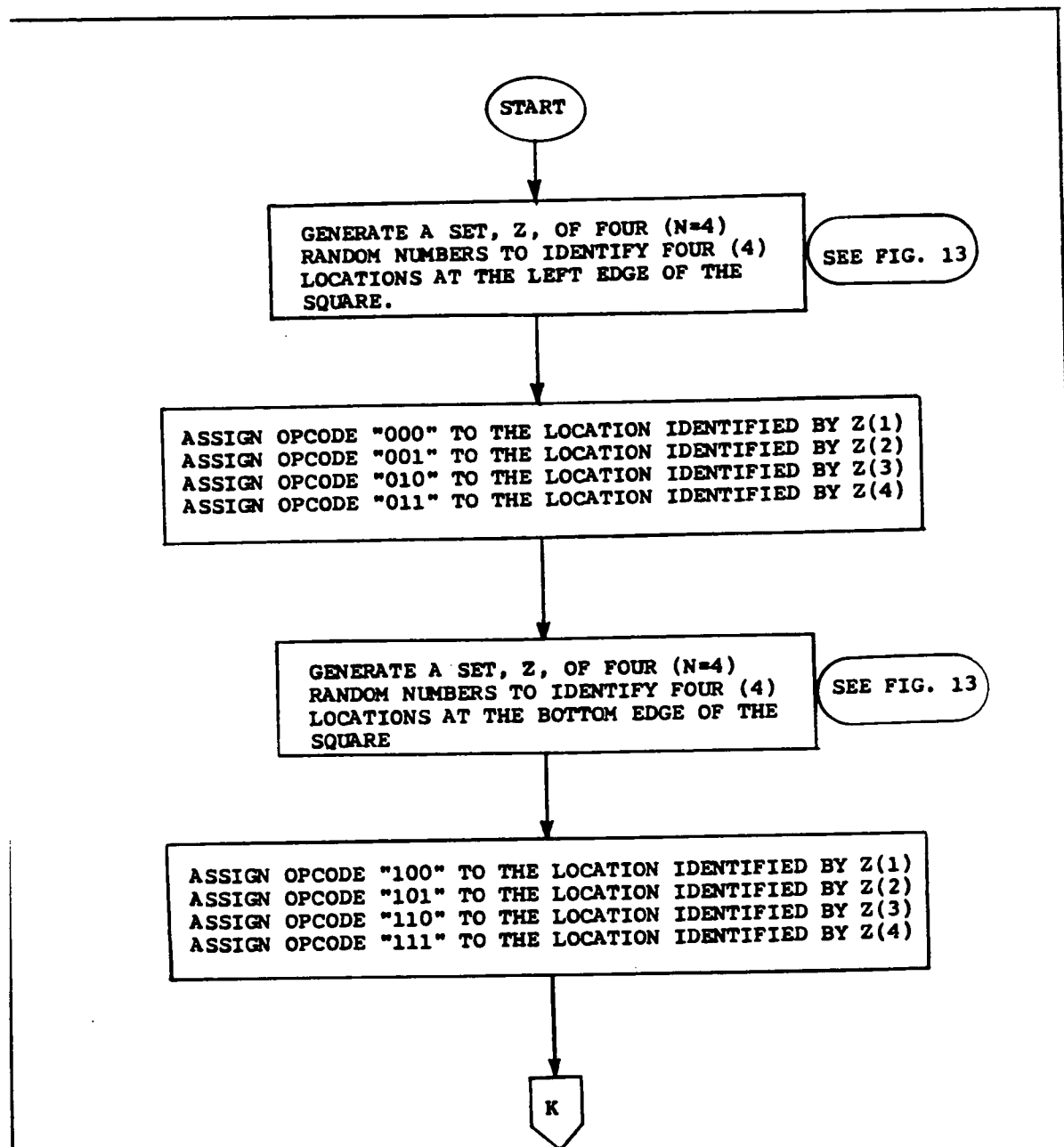


FIG. 14

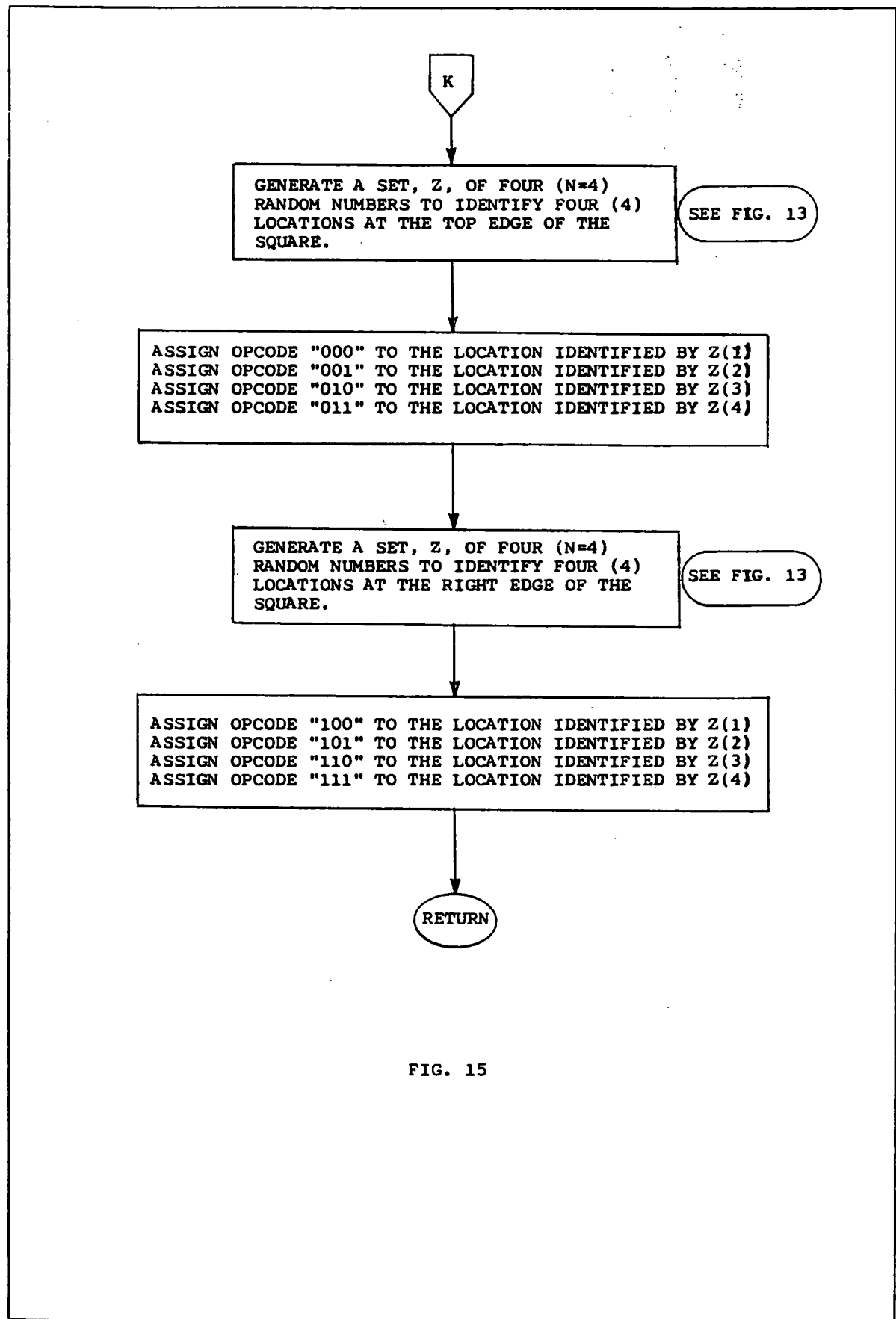
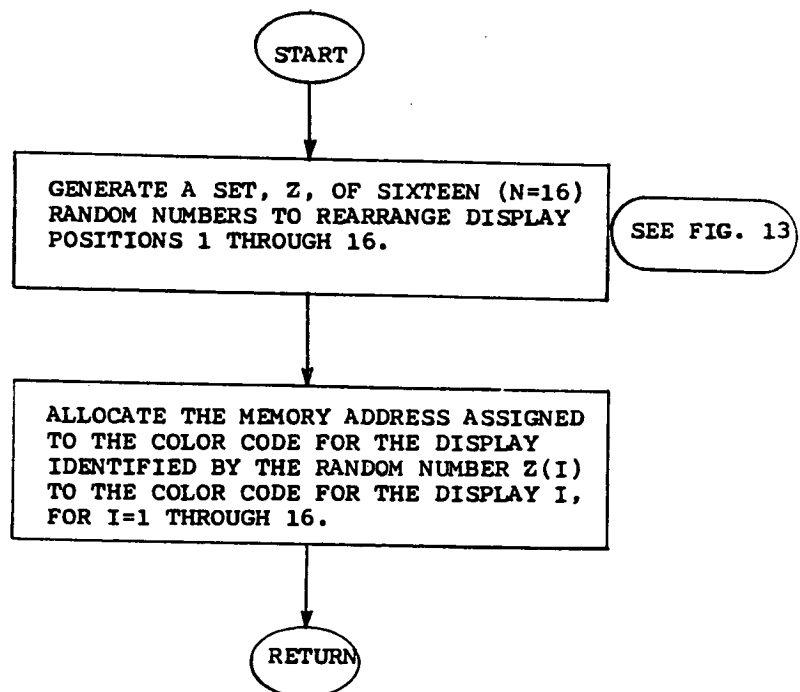
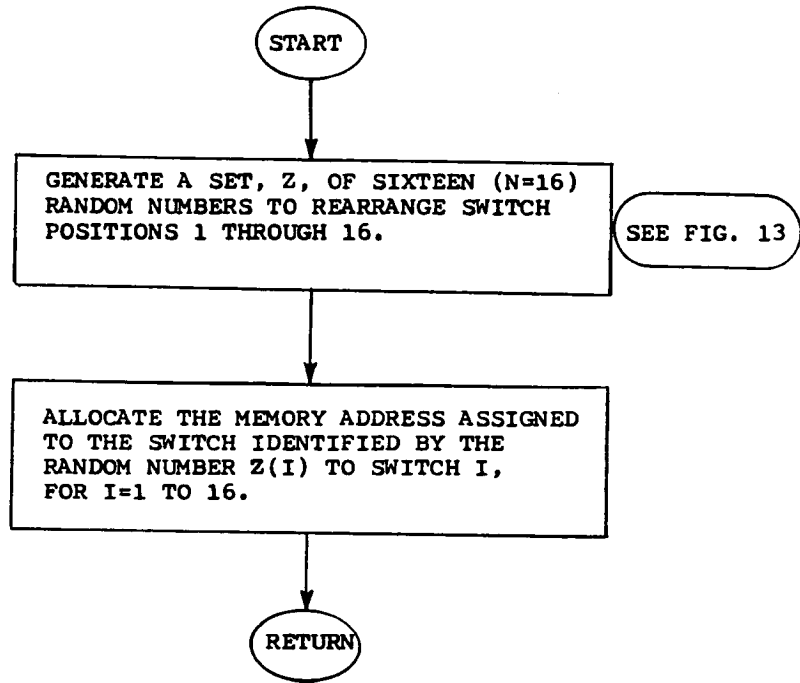


FIG. 15



LEGEND

N : DIMENSION OF RAINBOWX, i.e. NUMBER OF PREDETERMINED COLORS WHICH MAY BE DISPLAYED.
 = 4 (FOR THE REFERED EMBODIMENT)
 n : NUMBER OF BINARY BITS IN OPCODE AND COLOR CODE.
 = $\ln N + 1 = 3$ (FOR THE REFERED EMBODIMENT)
 I : ROW NUMBER I, $I = 1, \dots, N$
 J : COLUMN NUMBER J, $J = 1, \dots, N$
 DIR : ROUTE DIRECTION BETWEEN TWO ADJACENT ROUTING SQUARES;
 "R" DENOTES RIGHT
 "U" DENOTES UP
 "L" DENOTES LEFT
 "D" DENOTES DOWN
 T : OPCODE TRANSMITTER; $T = 1, \dots, 2N$
 R : OPCODE RECEIVER; $R = 1, \dots, 2N$
 RC(T) : RECEIVER CONNECTED TO TRANSMITTER "T"
 TC(R) : TRANSMITTER CONNECTED TO RECEIVER "R"
 W(I,J) : STATUS OF SWITCH LOCATED AT ROW "I" AND COLUMN "J"
 TCODE(T): OPCODE AT TRANSMITTER "T"
 RCODE(R): OPCODE AT RECEIVER "R"
 C(R) : COLOR CODE AT RECEIVER "R"
 x(i) : THE ith BIT OF OPCODE "X"
 y(i) : THE ith BIT OF OPCODE "Y"
 cb(i) : THE ith BIT OF COLOR CODE "C"
 C1(I,J) : COLOR CODE AT THE RIGHT EDGE OF THE ROUTING SQUARE LOCATED AT ROW "I" AND COLUMN "J"
 C2(I,J) : COLOR CODE AT THE TOP EDGE OF THE ROUTING SQUARE LOCATED AT ROW "I" AND COLUMN "J"
 C(I,J) : COLOR CODE SELECTED FOR DISPLAY AT THE ROUTING SQUARE LOCATED AT ROW "I" AND COLUMN "J"
 ⊕ : EXCLUSIVE OR BOOLEAN FUNCTION
 ⊙ : INCLUSIVE OR BOOLEAN FUNCTION

EXPLANATION OF PROGRAM VARIABLES OF FIGS. 19 - 22

NOTE:

* SEE FIGURE 18 FOR EXPLANATION OF PROGRAM VARIABLES.

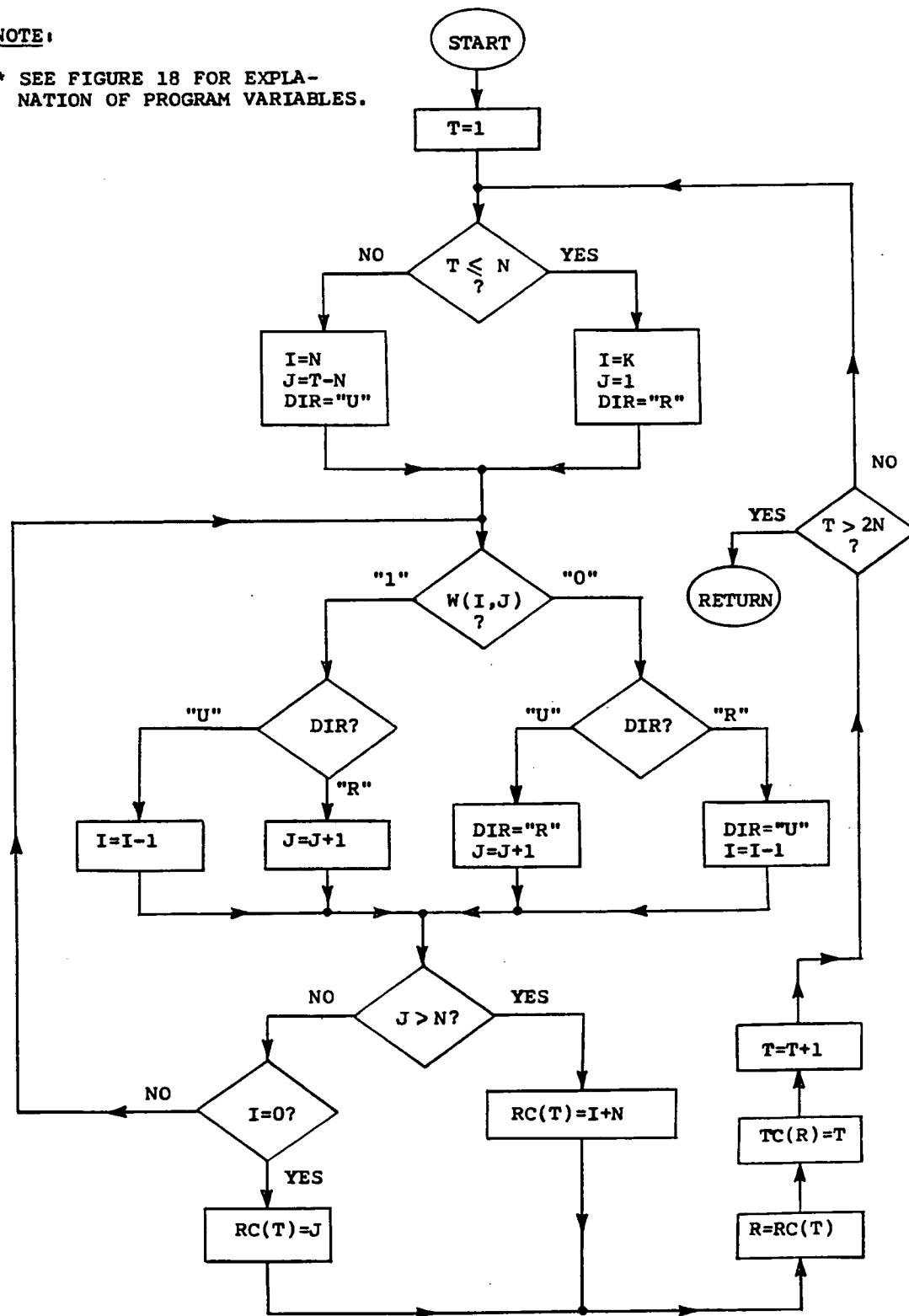
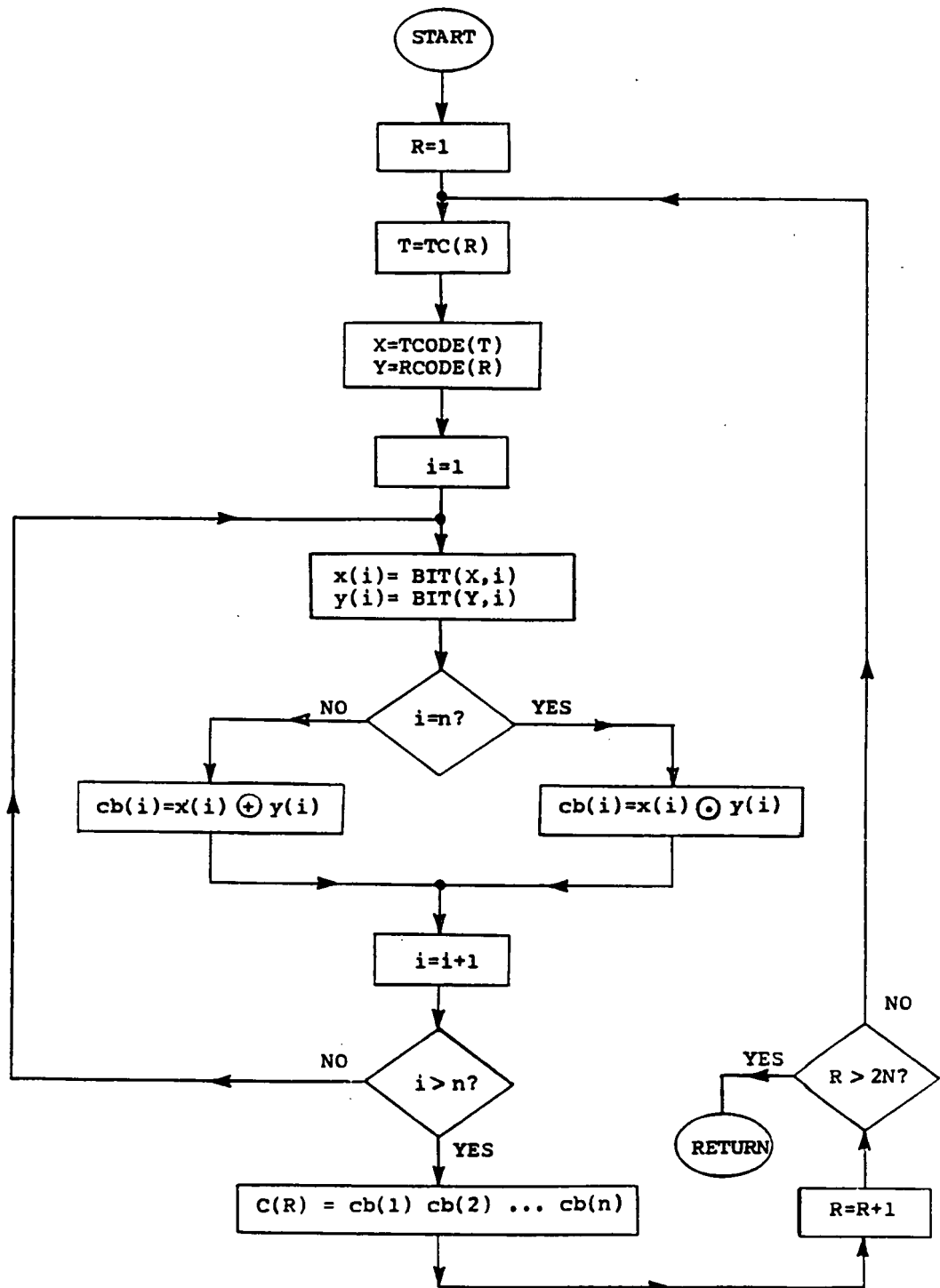


FIG. 19

**NOTE:**

* SEE FIGURE 18 FOR EXPLANATION
OF PROGRAM VARIABLES.

FIG. 20

NOTE:

* SEE FIGURE 18 FOR
EXPLANATION OF PROGRAM
VARIABLES.

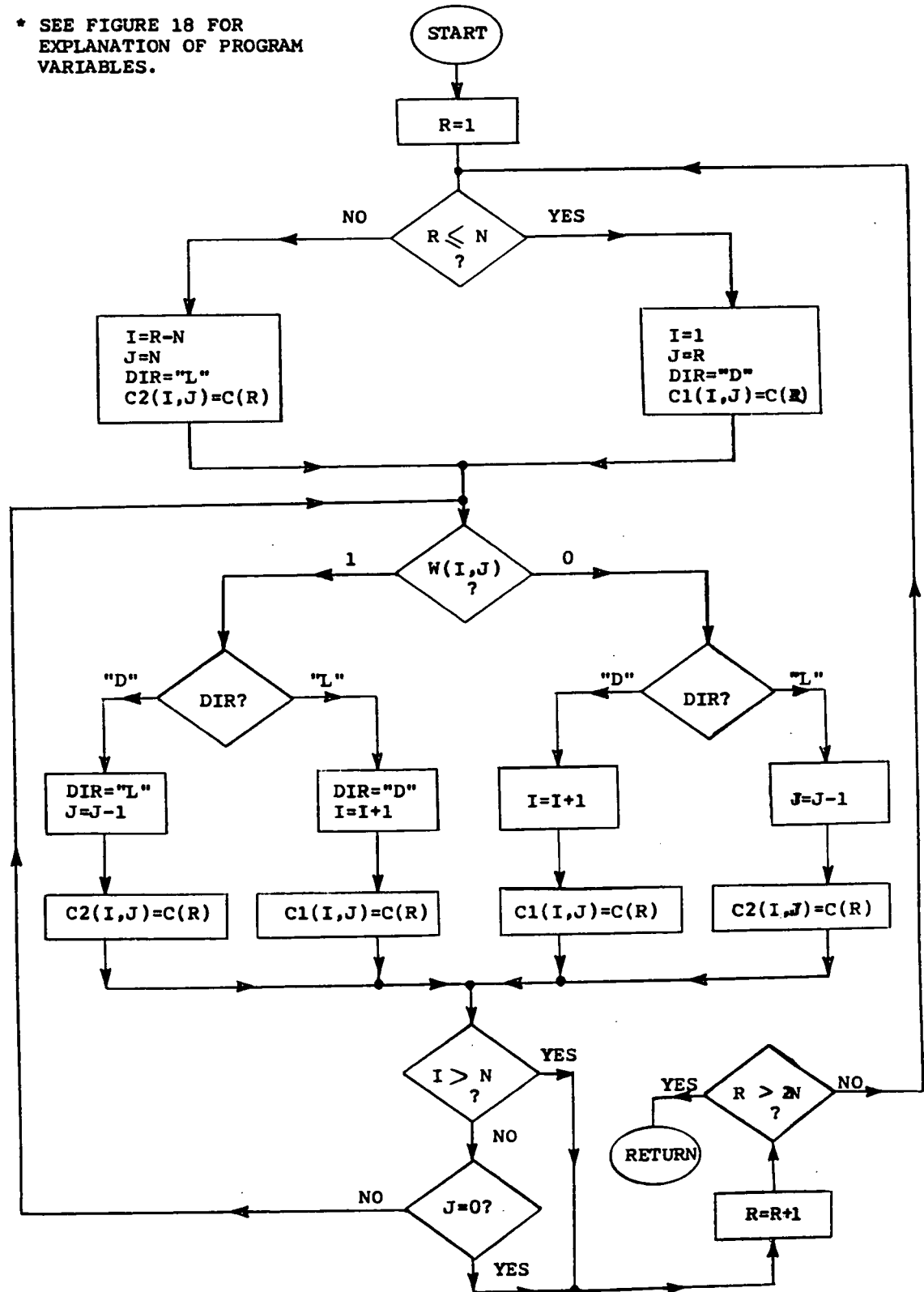
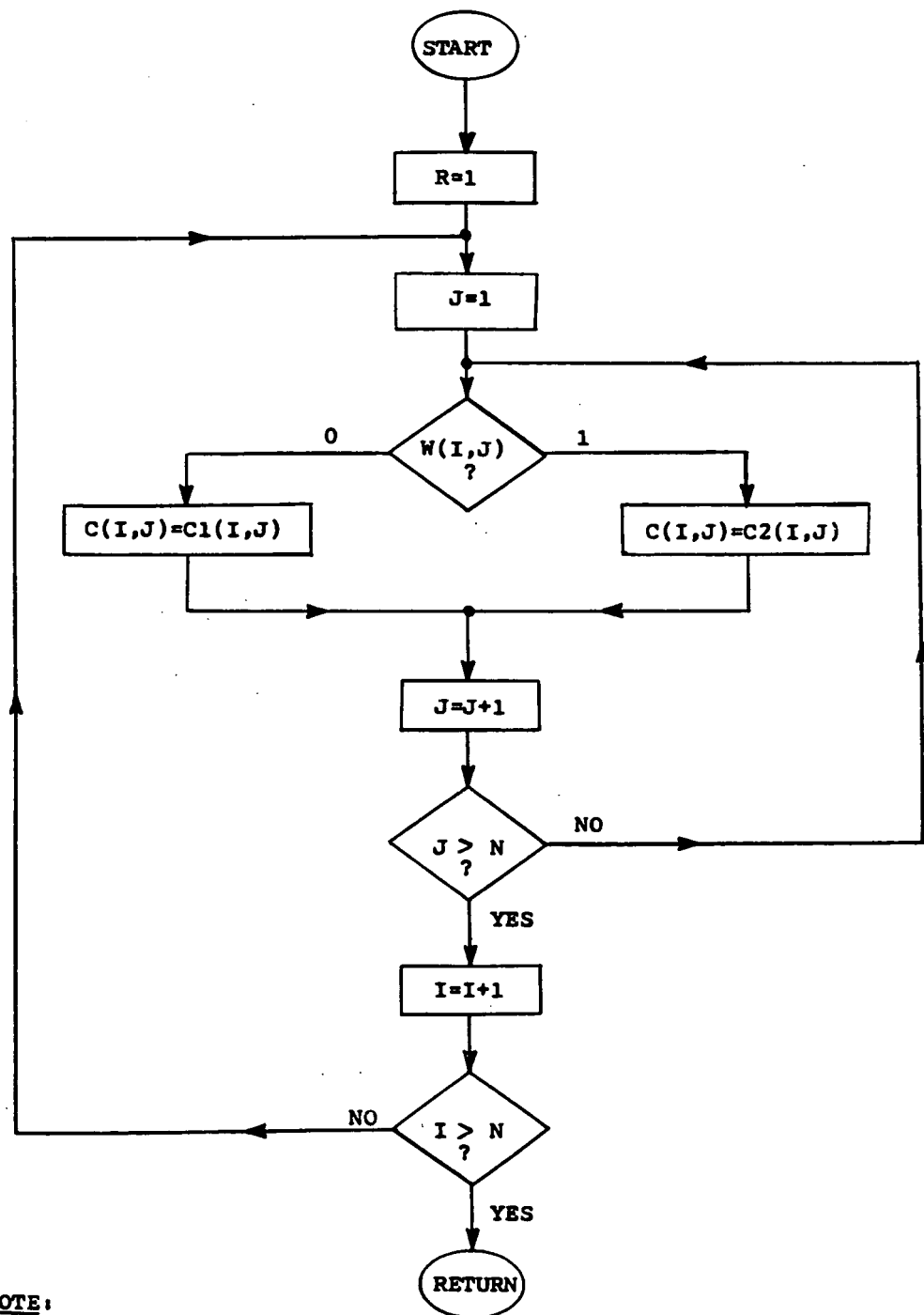


FIG. 21

**NOTE:**

* SEE FIGURE 18 FOR EXPLANATION
OF PROGRAM VARIABLES.

FIG. 22